DOCUMENT RESUME

ED 091 892 EC 062 049

AUTHOR Shea, Dick

TITLE Instructional Materials for Science.

INSTITUTION University of Southern California, Los Angeles. Instructional Materials Center for Special Education.
SPONS AGENCY Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE Apr 74
NOTE 50p.

EDRS PRICE MF-$0.75 HC-$3.15 PLUS POSTAGE
DESCRIPTORS *Annotated Bibliographies; *Exceptional Child Education; Handicapped Children; *Instructional Materials; *Instructional Media; *Sciences

ABSTRACT

The annotated bibliography lists approximately 270 instructional materials in science for use with handicapped or normal children from kindergarten through grade 12. Listings are alphabetical by publisher and usually include item title, order number, item price, a brief description, and abbreviations which refer to type of scientific content, media format, and grade level. Charts list materials developed especially for special education by scientific content area and materials for each grade level. Materials are concerned with the following content areas: physical science, earth science, ecology, life science, general science, scientific method, and experimental science. Media format includes films, filmstrips, filmloops, overhead transparencies, cassettes, records, instructional tapes, programed materials, and texts. (DB)

ED 091892

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

INSTRUCTIONAL MATERIALS FOR SCIENCE

by

Dick Shea

April 1974

EC092049

This project was supported in part by a grant from the Bureau of Education for the Handicapped, U.S. Office of Education which is gratefully acknowledged.

In this annotated bibliography we sought to develop a source of information that would present a range of material varying in media format for creating or supplementing a course in science. Because of the enormous amount of material available, we employed a selective as opposed to an exhaustive approach.

The remainder of this section describes how to use the bibliography and presents a bibliographic index.

A numerical notation has been employed with the whole numbers (e.g.1, 47) designating source, and fractional numbers (e.g. 1.4 or 47.3) designating items supplied by that source. Additionally, the sources occur alphabetically. An entry follows the format seen below:

A.	B.	C.	D.	E.	F.	G.	H.
10.4	Experiments in Physical Sciences	59271	$59.50	These FS visually present a variety of physical experiments illustrating diverse scientific principles.	PX	FS	4-5

"A" refers to the fourth item supplied by source 10. "B" indicates the item title followed by"C" its order number (if available) and "D" the item price. A brief description ("E") follows this. To provide a means of "rapidly evaluating", we presented the information "F" through "H" on the right; the first row ("F") indicates content (physical science, experimental in emphasis (see Table 1 for listing of abbreviations and their meaning). The second row ("G") indicates grade level (junior and senior high school). Asterisks by the item number and grade level denote materials developed especially for "special education".

As indicated above, Table 1 lists the abbreviations used throughout the bibliography. These fall into three classes: scientific content, media format and grade level.

TABLE I - LIST OF ABBREVIATIONS

GRADE		SCIENTIFIC CONTENT		MEDIA FORMAT	
Abbreviation	Meaning	Abbreviation	Meaning	Abbreviation	Meaning
1	K	P	Physical	F	Film
2	1st - 3rd	E	Earth	FS	Filmstrip
3	4th - 6th	K	Ecology	FL	Filmloop
4	7th - 9th	L	Life	OT	Overhead Transparency
5	10th - 12th	G	General	C	Cassette
		SM	Scientific Method	R	Records
		X	Experimental	IT	Instructional tapes
				PM	Programmed materials

*MATERIALS DEVELOPED ESPECIALLY FOR SPECIAL EDUCATION

G	P	E	K	L	X	SM
20.3		20.2	42.2	9.1		34.3
42.1				42.3		34.4
42.4				42.5		52.1
73.4						

GRADE - K (1)

General (G)	Physical (P)	Earth (E)	Ecology (K)	Life Science (L)	Experimental	Scientific Methods (SM)
2.2	1.1	17.1	20.5	7.2	1.1	21.2
6.1	17.2	17.2	34.6	10.8	2.2	22.2
20.6	64.5	20.4		18.2		37.1
22.1	68.1	35.1		35.2		39.8
22.4		59.2		36.4		64.9
31.1		64.6		36.5		
34.8				39.1		
52.3				64.8		
64.7				68.1		
				72.2		

FIRST, SECOND AND THIRD GRADE (2)

General (G)	Physical (P)	Earth (E)	Ecological (K)	Life Science (L)	Experimental (X)	Scientific Methods (SM)
2.1	1.1	7.1	34.6	2.3	1.1	7.5
2.2	4.2	7.6	36.2	4.1	2.1	13.1
6.1	14.2	10.1	37.3	7.2	2.2	21.2
10.2	15.2	13.7	51.4	10.8	4.1	21.5
20.6	16.1	14.1	64.1	12.1	4.2	21.7
21.7	17.2	17.1	65.1	12.2	39.5	22.2
22.1	21.6	17.2		13.7	40.1	37.1
22.4	25.3	20.1		21.1	40.3	39.8
24.1	36.1	20.4		21.10		40.1
31.1	64.5	23.1		25.1		40.3
33.1	65.6	35.1		32.1		52.2
33.3	68.1	36.3		32.3		64.9
33.4		54.2		34.2		65.2
34.1		59.2		35.2		
34.8		64.6		36.4		
37.8				36.5		
38.1				36.6		
39.5				37.2		
40.3				39.1		
40.4				46.3		
41.1				56.1		
45.7				59.2		
48.1				64.8		
50.5				68.1		
52.3				72.2		
53.1						
55.1						
58.1						
61.1						
64.3						
64.7						

FOURTH, FIFTH AND SIXTH (3)

General (G)	Physical (P)	Earth (E)	Ecological (K)	Life Sciences (L)	Experimental (X)	Scientific Methods (SM)
2.1	3.4	5.1	16.2	2.3	2.1	13.4
10.2	4.2	5.2	34.6	3.4	4.1	13.5
10.3	7.4	7.1	34.7	4.1	4.2	21.7
18.3	10.6	7.6	36.2	7.3	7.3	26.1
21.3	13.3	10.1	39.7	10.8	21.4	31.2
21.7	14.2	13.8	50.4	11.2	21.9	40.1
22.4	14.3	14.1	51.4	15.5	26.1	40.3
24.1	16.1	15.4	56.6	21.4	39.5	52.2
29.2	17.2	17.2	64.1	21.10	40.1	59.1
29.3	21.8	17.3	64.4	27.2	40.3	64.9
29.4	22.3	18.1		27.3	41.3	65.2
33.2	23.2	19.2		32.1	55.2	
33.4	25.2	29.1		32.2	67.1	
34.1	25.3	35.1		32.3	71.1	
34.9	37.4	36.3		35.2		
36.7	49.4	41.2		35.3		
38.1	55.2	49.3		36.5		
39.2	56.2	50.2		36.6		
39.5	57.2	54.2		37.2		
40.3	65.2	56.3		39.1		
41.3	72.3	59.2		44.1		
45.7		64.4		44.3		
48.1		64.6		44.4		
52.3		64.10		45.8		
53.1		70.1		46.1		
55.1		72.3		46.2		
58.1				46.3		
61.1				46.4		
64.3				46.7		
64.7				49.2		
67.1				50.1		
71.1				50.3		
73.1				51.2		
73.2				51.3		
				56.3		
				59.2		
				64.8		
				68.2		
				70.1		

SEVENTH, EIGHTHS AND NINTHS (4)

General (G)	Physical (P)	Earth (E)	Ecology (K)	Life Sciences (L)	Experimental (X)	Scientific Methods (SM)
10.3	3.4	5.1	28.2	3.4	4.1	6.2
29.2	4.2	5.2	34.6	4.1	4.2	13.5
29.3	10.4	13.2	34.7	6.3	7.3	13.6
29.4	10.6	13.8	37.5	7.3	10.4	31.2
33.2	13.3	14.4	39.4	10.5	21.4	43.1
34.1	14.3	15.4	45.9	10.8	21.9	43.2
34.9	16.1	15.6	47.1	11.1	55.2	52.2
39.2	21.9	17.3	50.4	11.2	56.4	59.1
45.1	22.3	18.1	56.6	15.5	67.1	
46.5	23.2	19.2	64.4	21.4	71.1	
46.8	37.6	25.4	70.2	27.1		
52.3	40.2	29.1		27.2		
58.1	44.2	30.2		27.3		
61.2	49.4	37.7		28.1		
63.1	49.5	39.3		28.2		
67.1	55.2	39.6		32.2		
70.4	56.2	40.2		35.2		
71.1	56.4	41.2		35.3		
71.2	56.5	48.2		39.1		
72.1	57.2	49.3		44.1		
73.1	60.2	50.2		44.3		
73.2	68.3	51.1		11.4		
73.3	70.4	54.2		15.1		
		56.3		15.10		
		57.1		46.4		
		59.2		46.7		
		60.1		49.2		
		64.4		50.1		
		64.10		50.3		
		70.1		51.2		
				51.3		
				54.1		
				56.3		
				59.2		
				64.8		
				68.2		
				58.3		
				70.1		
				70.2		

TENTH, ELEVENTH AND TWELFTH (5)

General (G)	Physical (P)	Earth (E)	Ecology (K)	Life Sciences (L)	Experimental (X)	Scientific Methods (SM)
45.7	3.2	3.3	34.5	3.1	10.4	3.1
46.5	3.3	5.1	34.6	3.4		3.3
46.8	3.4	5.2	37.5	6.3		6.2
63.1	8.4	13.2	45.9	8.1		15.3
70.4	10.4	13.8	47.1	8.2		59.1
70.5	10.7	14.4	64.4	8.3		
71.2	14.5	15.1	70.2	10.5		
72.1	16.1	15.6		10.8		
73.3	37.6	17.3		11.1		
	40.2	19.2		11.2		
	44.2	25.4		12.3		
	45.2	30.2		15.5		
	45.3	37.7		15.7		
	45.4	40.2		15.8		
	45.5	48.2		19.1		
	45.6	51.1		27.1		
	49.5	57.1		30.1		
	60.2	60.1		44.1		
	64.2	62.2		44.3		
	69.1	64.4		45.1		
	69.3	64.10		45.10		
	70.4			50.3		
				54.1		
				66.1		
				70.2		
				70.3		

1. American Science and Engineering
20 Overland
Boston, Massachesetts 02215

1.1 Explorations in Science $38.50
Kit uses a Piagetian approach to develop concepts of state (e.g. solid, liquid), density and solubility. Unit also focuses on grouping, ordering and measuring.

P,X, materials, manual 1-2

2. American Seating
800 N. Sepulveda
El Segundo, California 90245

2.1 Elementary Science Kit, S-400 #45.00
Kit provides the means and ideas for conducting 150 experiments in the physical, space, plant and animal sciences

G,X, materials, charts and manual 2-3

2.2 Science Kit. S-402, $25.00

G, X, materials, manual 1-2

2.3 Five Senses 3100-3500 $8.75
Five plastic models illustrate man's senses.

L models, 2-3

3. Audiovisual Inc.
5235 Ravenswood Avenue
Chicago, Illinois 60640

3.1 The Complete Biology $1,478.25
Using FS, FL, and OT this instructional material presents a complete course in biology, specifically covering biochemistry physiology, and ecology. Unit also emphasizes methods and techniques of measurement.

L, SM, FS, FL, OT 5

3.2 The Complete Physics $574.75
Materials include FS and OT; unit covers standard areas of physics (e.g., light, sound, mechanics etc).

P, FS and OT 5

3.3 The Complete Earth and Space Science $352.75
Package includes OT and FS and covers such areas as astronomy, weather, and earth; emphasizes scientific methodology.

P, E, SM, OT, FS 5

Audiovisual Inc.(continued)

3.4 The Complete General Science Package $215.00 — P and L, OT 305
Package consists of OT that illustrates various areas of the physical and life sciences.

4. Baker Science Packets
650 Concord Drive
Holland, Michigan 49423

4.1 Baker Nature Story Packet $5.95 — L, X Card File 2-4
Packet lists experiments that students can perform without expensive apparatus. Student guides are available at cost of $.50 per guide.

4.2 Baker Physical Science Packet $5.95 — P, X Card File 2-4
Performs same function as above.

5. Barr Productions
P. O. Box 7-C
Pasadena, California 91104

5.1 Geological History of the Grand Canyon $125.00 — E, F (16mm) 3 - 5
Film illustrates and explains the canyon history.

5.2 Rocky Mountains, $215.00 — E, F (16mm)
Film interprets the history of these mountains in terms of the forces shaping and modifying them.

6. Behavioral Research Laboratories
Box 577
Palo Alto, California 94302

6.1 Sullivan Adventures in Science, 4175-77, $66.61 per unit, total $199.83 — G, Text, Cassetts Audio-visual 1-2
This series is designed for the non-reader and serves as an introduction to science. Audio-visual presents adventures in surroundings familiar to the child. Teacher's guide describes inexpensive experiments.

6.2 Number and Units for Science, 0300, $7.48 — SM, Programmed Text 4-5
Text focuses on measurement and the use of numbers in science.

6. Behavioral Research Laboratories (continued)

6.3 Principles of Modern Biology. 0450, $95.04 — L, Programmed exts. 4-5
The text approaches biology in terms of levels of organization ranging from the cell to ecology and populations, unit stresses concepts of structure and function. The material is organized into 9 units with each unit including a student text, teacher guide and test booklet.

7. BFA
Educational Media
2211 Michigan Avenue
Santa Monica, California

7.1 Earth Sciences Series, 408000, $720.00 — E, F (Super 8) 2-3
Series consists of 23F that illustrate the various ecological formations and their shaping forces. Also includes material on paleontology.

7.2 Habitat, 3K2000, $40.00 — L, FS (Captioned)
Visual materials depict animals adapting to their physical and social environment.

7.3 Life Sciences Series. 425000, $720.00 — L, X F (Super 8) 3-4
Series of 30F illustrate the methods and materials necessary to conduct experiments in biology and nature. Materials covers a wide range of topics (e.g., techniques for capturing and keeping insects, procedures for building inexpensive instrumentation, methods of plant experimentation etc.).

7.4 Investigations in Science: Properties of Matter, 352000, $46.00 and Energy and Motion, 349000 $61.00 — P, FS + C 3
9 FS and accompanying C illustrate the above physical topics while emphasizing inductive reasoning in acquiring such physical concepts as force, energy and form of matter.

7.5 The Process of Science: Classifying, 302000, $32.00 — SM, FS (Captioned) 2
Series of 4FS is designed to lead the young student through experimentation to grouping of familiar objects.

7.6 Oceanography, $65.00 — E, FS, Charts 2-3
This unit includes FS, charts marine specimens and a reference book illustrating the variety of plant and animal life in typical ocean environments.

8. Robert J. Brady
130 One Street, N. E.
Washington, D. C. 20002

8.1	Anatomy and Physiology, $45.00 A 15 volume programmed text introducing the above content areas.	L Programmed Kit 5
8.2	Anatomy and Physiology, $300.00 15 programmed full color FS plus sound present information on above topics.	L, FS + C 5
8.3	Biology, $295.00 This set of 10 OT covers the following units; cell, genetics, zoology, botany and ecology Includes teacher's manual.	L, OT, 5
8.4	Teaches General Science Units 1 and 2, $210.00 Units 1 and 2 cover the areas of light and sound.	P, OT with OL, 5

9. BSCS
P. O. Box 930
Boulder, Colorado

9.1	Life Science: Me Now Life science program, BSCS, developed for 10-14 year old EMR. Program consists of four units; body function, perception, and growth and development. Emphasizes Brunner's inquiry approach.	L, Charts, FL, 35 mm slides.

10. CENCO
6446 Telegraph Road
Los Angeles, California 90022

10.1	Elementary Earth Sciences, 59330-13, $43.50 These visual aids illustrate concepts found in standard texts. Study guide included.	E, OT, 203
10.2	Basic Science Series. 59315-1, $249.00 Similar to above but also covers other physical sciences as well as the life sciences.	G, OT, 2-3
10.3	Elementary Science. 59337-900, $690.00 This set of 224 OT and study guides illustrate standard areas of the physical (e.g. light, mechanics) and life (e.g. plant and animal life) sciences.	G, OT, 304
10.4	Experiments in Physical Sciences, 59271, $59.50 These FS visually present a variety of physical experiments illustrating diverse scientific principles. FS illustrate the required apparatus.	P, X, FS, 4-5

Cenco (continued)

10.5 Modern Biology: Environment and Survival, 59280 $49.50 — L, FS + Records 4-5
Using an audio-visual approach the materials describe the interdependance of plants, animals and their habitat. Includes a teacher guide.

10.6 Understanding Electricity, 59241, $27.00 — P, FS + Records, 3-4
Using an audio-visual presentation the materials illustrate and explain basic principles of electricity. Teacher's guide included.

10.7 Millers Demonstration in Physics Series, 56699-220 $228.00. — P, FL, 5
The set of 19 FL covers a wide range of topics and presents many classical experiments.

10.8 Natural History Series, 56699-999, $555.00 — L, FL, 1-5
This set of 37 FL covers the range of organizational complexity in the animal kingdom; also focuses on the forms of adaptation to the environment shown by the various members of the animal kingdom.

11. Center for Cassette Studies
8110 Webb Avenue
North Hollywood, CAlifornia 91605

11.1 The Awful Arachnids, 1 523, $14.95 — L, C, 405
An audio presentation that defines who and what they are.

11.2 Whales and Porpoises, 13433, $14.95 — L, C, 3-5
Material describes their life style, how mammals survive in the water and their place in evolution.

12. Churchill Films
% R. Glore
5512 Cathedral Oaks Road
Santa Barbara, California 93111

12.1 Growing, Growing. $130.00 — L, F, 2

12.2 Wonders in a Country Stream, $65.00 — L, F. 2
Film reveals the types of life two children find in a pond and a stream.

12.3 Exploring the Human Nervous System, $150.00 — L, F, 5
Film compares man's nervous system with those of lower organisms. Illustrates such concepts as the reflex arc.

13. Coronet
65 East South Water Street
Chicago, Illinois 60601

13.1 Measuring Things, M118, $60.00 — SM, FS +C, 2
An audio-visual presentation (6 FS+C) depicting realistic examples that explain the fundamental importance of measurement.

13.2 Oceanography, M182, $70.00 — E, FS + C, 4-5
This set of 6 FS and accompanying C surveys the fields of marine and physical oceanography.

13.3 The Story of Space Flight, M234, $10.00 — P, FS+C, 3-4
Set of 6 FS and C overviews man's conquest of flight. Illustrates the potential exploration of the planets.

13.4 How Scientists Think and Work, $30.00 — SM, Text, materials, 3
This field tested learning program describes the attributes, methodology and thinking of the scientists.

13.5 Grouping Things in Science, $70.00 — SM, F (16mm) 3-4
Film illustrates how familar objects are grouped to meet scientific objectives.

13.6 Nature of Science, $507.50 — SM, F (16mm) 4
Obtaining Facts 140.00
Forming Hypotheses 105.00
Testing Hypotheses 87.50
How Ideas Change 175.00
A set of 4 F that illustrate,in great detail, the process of scientific discovery and methodology.

13.7 We Explore Series, $455.00 — E, L, F (16mm)
Mountains, Oceans, Beaches, Deserts, Field and Meadows, Streams, Woodland. Each $65.00.
This series of F explores various life systems in the above environments.

13.8 Understanding Our Earth Series, $260.00 — E, F (16mm) 3-5
Rocks and Miners, Soil, How Earth's Surface Changes, Each $65.00.
This set of films describes the earth's structural elements and the forces modifying them.

14. DEMCO
Box 7767
Fresno, California 93727

14.1 Conservation of Natural Resources, 78-0698; $232.50 — E, OT, 2-3
A series of 48 OT (plus teachers guide) shows how our lives depend upon natural resources

14.2 Applied Sciences, 78-0520 — P, 2-3 OT
A set of 12 OT illustrating various physical concepts and their practical applications. Includes a teacher's guide.

14.3 Atomic Energy, 78-0020, 82-0011, $39.50 — P, OT, 304
A lab kit, teachers guide and 6 OT form this unit. The materials illustrate the development of different atoms and how energy can be obtained through fission and fusion.

14.4 Earth Sciences 78-0716. $252.00 — E, OT, 405
Materials illustrate the following areas: meteorology, oceanography and astronomy, also includes a unit on laboratory investigations.

14.5 Electronic Physics, 76-7425 $230.00 — P, FS, 5
This unit (20FS + teachers guide) is designed to be incorporated into a physics course and visually provides an introduction to basic principles of physics.

15. Denoyer Geppert
6112 South Condon Avenue
Los Angeles, California 90056

15.1 Earth Sciences 910012, $355.00 — E, OT, 5
This integrated program (82 OT) covers meteorology, astronomy, geology and map reading.

15.2 Our Physical World 1 & 11, H19 and H28, $56.25 — P, FS, 2
Unit (9 FS) focus on experiences familar to students.

15.3 Measurement, H15, $43.25 — SM, FS, 5
An introduction to measurement of length, volume, and velocity in this unit of 7 FS.

15.4 Earth I, II, E3. E16, $62.50 — E, FS, 304
These units (10FS) illustrate the various features of the earth and focus on their shaping forces.

Denoyer Geppert (continued

15.5 Talking Torso, 700302 $305.00 — L, Model, Aids, C, 3-5
A multi-media presentation of the human body. Model has removable organs.

15.6 Ecology, 689581, $150.00 — E, Slides (35mm) 4-5
Materials depict populations, food chains, and ecological successions.

15.7 Biology, 44051-99, $310.50 — L, OT, 5
A set of OT presenting a program in modern biology including chemistry and human physiology. Materials include lesson books.

15.8 Evolution of Animal Life, 689701, $200.00 — L, Slides (35 mm)
This set of 480 35mm slides provides the basic data for the theory of animal evolution. Includes a teacher's manual.

16. Doubleday
Box 11607
1371 Reynolds
Santa Ana, California 92705

16.1 Man on Moon, 77002 $103.00 — P, FS+C, 2-5
This set of 5 FS +C examines aspects of astronauts and indicates benefits derived from the space age.

16.2 Animals Adapt to their Environment, 58325, $185.00 — K, FL (super 8) 3
This set of FL illustrates how animals adapt to the diverse environments of the earth.

17. Educational Activities
P. O. Box 392
Freeport, New York, 11520

17.1 Seasons FSR424 $38.00 — E, FS, C, 1-2
This audio-visual presentation shows children exploring the seasons in terms of their textures, sights, sounds and activities.

17.2 Elementary School Science Program $270.00 — P, E, FS+C, 1-3
An audio-visual presentation (28 FS+C) of "what science is". Content areas covered include earth, astronomical and physical sciences. The latter is almost solely concerned with energy--its forms, sources and uses.

17. Educational Activities (continued)

17.3 Keys to Basic Ecology $150.00 — E, FS+R, 3-5
This set of 18 color FS and 9 records (33 1/3rpm) falls into three units: Diversity in Nature, Interrelationships of Natural things, and Adaption.

18. Educational Development Corporation
Learning Resources Division
202 Lake Miriam Drive
Lakeland, Florida 33803

18.1 Ecology: Water Pollution Lab. 11-02 $225.00 — E, Lab, 3-4
Complete laboratory includes 8 investigations with 21 basic classroom experiments. Special emphasis is placed on helping students become aware, concerned and active in regard to water pollution.

18.2 Human Growth and Development #20-0122, $143.00 — L, FS+C, I
Program is designed to provide a comfortable understanding of human growth and development

18.3 Science Explore Tapes, 7-20 $295.00. — G, C, 3
This program allows for study of topics not generally provided in the curriculum and leads to increased interest in science and science concepts. Covers such diverse areas as "Social Behavior of Animals","Archaeology: Discovery of an Ancient City", and "The Mind of a Computer". The set consists of 40 audio lessons which may be obtained in individual audio lessons each including a cassette, 30 copies of student activity sheets and a Teacher's Guide @ 8.50 each.

19. Educational Filmstrips
1401 19th Street
Huntsville, Texas 77340

19.1 Man's Biological Heritage, F1-68-2003 -2014-2017 plus 70-736694, $60.00. — L, FS+C, 5
A-V unit with captioned FS (6) that is designed to illustrate the development of the human species. Includes teacher's manual.

19.2 World Famous Volcanoes. 75-740108, 79-740109, 73-740110, 77-74011, 70-740112, $50.00 — E, FS+C, 3-5
Unit depicts the results of volcanic activity. Includes teacher's manual.

20. Educational Projection Corporation
527 South Commerce Street
Jackson, Mississippi

20.1	The Earth, 1138-1140, $18.00, 1138-1140, $18.00	E, S, 2
20.2	*The Seasons, K-002, $169.50 This A-V unit aims to demonstrate how the seasons affect our daily activity. Unit includes 10 OT, 10C, FS, 16 student manuals and teacher's manual.	E, FS, OT, C, Texts
20.3	*Science K-10-2, $169.50 This A-V unit presents the development of science from ancient to modern times and the application of scientific principles to daily living.	F, OT, FS, C, Texts
20.4	Animals of Long Ago, PG-48, $41.85 Illustrates and informs about prehistoric animals.	E, FS+C, 1-2
20.5	Ecology, PG-53, $24.00	K, FS, 1
20.6	Looking at Nature PG-57, $47.85 Shows how instruments aid our senses.	G. FS. PT. C 1-2

21. Educational Reading Service
320 Rt. 17
Mahwah, N. J. 07430

21.1	Our Wonderful World Nature $96.27 Describes the variety of living things and their environments.	L, Text, 2
21.2	The Path to Discovery, $14[illegible].00 These volumes (41) introduce scientific concepts and activities as well as the physical, earth and life sciences.	SM, Texts, 1-2
21.3	Science: Man's Most Important Tool, $104.96 Texts (24) explore in depth, various scientific principles of the physical and life sciences.	G, Texts, 3
21.4	Classroom Nature Activities, $42.00 These 7 FS illustrate techniques for keeping plants and animals in the classroom or home.	L, X, FS, 3-4

21. Educational Reading Service (continued)

21.5 Science Processes $164.00 — SM, FS, 2
This programmed 24 FS illustrates the scientific activities of observing, classifying, measuring and experimenting.

21.6 Science Facts $60.00 — P, FS, 2
Materials (12 FS) cover standard areas of physics.

21.7 Discovering Why $341.00 — F, SM, FS, 2-3
This series of 53 FS parallels the science curriculum of McGraw-Hill. Unit encourages observation and problem solving.

21.8 The Story of the Universe $184.00 — P, FS, 3
Introductory course in astronomy (D4FS)

21.9 Experimenting with Science $174.95 — P, X, Kit, 3-4
12 self contained kits of materials cover various topics in physics.

21.10 Animal Instinct and Survival Techniques $129.00 — L, FL(super 8) 2-3
6 FL reveal survival through behavior and protective adornment.

22. Eye Gate House
146-01 Archer Avenue
Jamaica, New York 11435

22.1 Basic Concepts in Science, 8234825, $642.00 — F, F (super 8) 1-2
This unit consisting of 26 color super 8 F, was designed to develop skills of observation, measurement, classification and comparison of data, and drawing of inferences. Unit covers physical, earth and life sciences. Includes study guides and teacher's manual.

22.2 What is a ? X229, $47.50 — SM, FS+C, 1-2
Unit (6 color FS+C) introduces classes of natural phenomena.

22.3 Elementary Science Series, 847, $547.00 — P, F, Tape, 3-4
A set of 25 Super 8 color F plus tapes A-V presents information on physics and chemistry.

22.4 Fundamentals of Sciences, T7303, $569.50 — G, FS+C, 1-3
A complete program (81 FS+C) covering physical/life sciences with particular emphsis on scientific methodology.

23. Film Associates
11559 Santa Monica Boulevard
Los Angeles, California 90025

23.1 Earth Science Series. ES1-6, $547.00 — E, FL, 2
31 FL illustrate content in geology, paleontology, oceanography and space sciences.

23.2 Physics $283.00 — P, FL, 3-4
17 FL illustrate standard areas of physics.

24. Follett Instructional Materials
1010 Washington Boulevard
Chicago, Illinois 60607

24.1 Science for Human Values — F, PI, 2-3

Level 1	#4510	#4516	$6.15
Level 2	4520	4526	6.57
Level 3	4530	4536	7.01
Level 4	4540	4546	7.59
Level 5	4550	4556	7.71
Level 6	4560	4566	8.07
			$43.10

Integrated series of texts covering science in general.

25. Tom Handy School Service
2781 East Grand Boulevard
Detroit, Michigan 48211

25.1 Insects Around Us. 1120 $27.35 — L, FS (color) 2
Winner of numerous awards. Acquaints children with various insects, (habits, homes, appearance). Enables children to identify and make collections of live insects for study.

25.2 Heat, Light and Sound 1200, 7 FS color $38.30. — P, FS(color) 3
These FS present basic principles of 3 forms of energy, heat, light and sound, presenting actual experiments which can be performed by students.

25.3 Airplanes, Jets and Rockets, 1220, $35.85. — P, FS, 2-3
Visual explanations of basic principles, construction, and operation of various methods of flight.

25.4 Understanding the Atmosphere, 1330, $27.35 — E, FS(color) 4-5
Emphasis of these FS is on the importance of air to man, chemical and physical aspects of the atmosphere. Numerous experiments are suggested.

26. D. C. Heath
2700 North Richardt Avenue
Indianapolis, Indiana 46219

26.1 Pattern and Processes of Science $89.58 — SM, X, Text, Tapes
This material gives the student first hand experience using scientific methodology. Materials include lab text, teacher's manual and tests (duplicating masters).

27. Holt/Ealing
Holt, Rinehart and Winston, Inc.
383 Madison Avenue
New York, New York 10017

27.1 Pecking Order in Chickens, 81-7817/1, $24.95 — L, FL, 4-5
Presents an experiment in which pecking order is established, demonstrating the phenomenon of social orders of dominance in animal groups. Part of a set of 8 color FL (89-4451-1) ($199.60); a series of the more important behavioral animal studies done. Includes some of the work of Tinbergen and Shafer.

27.2 Bones, 89-2646/1, $79.75 — L, FL, 3-4
Using a technique permitting X-ray studies in motion, this series demonstrates the structure, movement and function of the principle parts of the body.

27.3 Darwin's Voyage, 89-4030/1 $149.70 — L, FL, 3-4
Series re-traces portions of Darwin's famous voyage aboard HMS Beagle--showing the same scenes Darwin saw; studying the animals which eventually contributed to his revolutionary theory of evolution by natural selection. The student is provided with the same kind of information available to Darwin, and is left to draw his own conclusions. Notes accompany the film.

28. Houghton-Mifflin
777 California Avenue
Palo Alto, California 94304

28.1 Overhead Visual Biology, 2-03058, 1,77237, 2-77450, $97.60. — L, OT, 4
A set of 25 OT visually presenting the field of botany.

28.2 Man and Environment $51.19 — L, K, Text, 4
A complete introductory life science program with special emphasis on ecology. Includes games and instructions for carrying out investigations.

29. Instructional Aids
Box 293
Owatonna, Minn. 55060

29.1 Earth Sciences $99.00 — E, Photos, 3-4

29.2 Modern Science I, $142.00 — G, OT, 3-4
This unit, which focuses on astronomy, meteorology. geology and life sciences correlates with the science text by Blanc, Fischler and Gardner.

29.3 Modern Science II, $142.00 — G, OT, 3-4
Continuation of above.

29.4 Modern Science III, $142.00 — G, OT, 3-4
Continuation of above with emphasis on the quantitative nature of science.

30. Instructional Material and Equipment
1520 Corner
Los Angeles, California 90025

30.1 Biology. 72023-003, $87.50 — L, OT, 5
21 OT comprise this general coverage of biology.

30.2 Earth Sciences Series. &2010-72012, $283.50 — E, OT, 4-5

31. Instructor Inc.
P. O. Box 6108
Duluth, Minnesota 55806

31.1 Primary Science Concept Series 661-668, $28.00 — G, Charts, 1-2
This set of 96 charts and teaching guides provide information on the physical and life sciences with the aim of motivating discussion.

31.2 Science Concepts and Processes 581-590, $35.00 — SM, Charts, 3-4
Unit is designed to encourage discovery through observation and exploration.

32. Journal Films Inc.
909 West Diversey Parkway
Chicago, Illinois 60614

32.1 Adapting to Changes in Nature $135.00 — L, FS (color) 2-3
FS Illustrate the various forms of adaptation.

32.2 Evolution of the Hands $125.00 — L, FS, 3-4
A set of FS designed to illustrate the evolution of the hand and its adaptive value.

32. Journal Films Inc. (continued)

32.3 Life Span $155.00 — L, FS, 2-3
Compares and analyzes the varying life spans of different animals.

33. Knowledge Aids
6623 West Howard Street
Niles, Illinois 60648

33.1 Springboard to Science 4100A, $134.50 — G, FS, C, Posters 2
Principle focus of this unit is on the life sciences

33.2 Science 1150, $132.50 — G, C, 3-4
This unit includes spirit duplicating masters and covers physical, earth and life sciences.

33.3 Natural Science, 4100-A, $179.95 — G, C, FS, Texts 2
Character "Alphi" shares his adventures and desires to discover more about the wonders of science. Aimed at developing skills of reading, listening, speaking and visual perception.

33.4 Alphi's I Wonder Why? 4301 $390.00 — G, F, 2-3
A set of films (3) aimed at stimulating problem solving as well as self-initiated experimentation.

34. Learning Arts
P. O. Box 917
Wichita, Kansas 67201

34.1 Elementary Science ESSE-fss, $339.00 — F, FS, 2-4
Total of 53 FS which can be grouped into units.

34.2 Life Sciences, lifsci-fr, $148.00 — L, OT, 2

34.3 *Science Readiness, SPSE-fssp, $164.00 — SM, FS, *
Contains four sets of FS labelled "observing and describing, measuring, classifying and experimenting".

34.4 *Science Readiness. SCIBEA-FR, $174.00 — SM, OT, *
Materials illustrate similarities-dissimilarities using optical illusions.

34.5 Ecology and Man. EAMSE-FSS, $147.00 — K, OT, 5
Basic concepts of ecology and their applications are contained in this unit.

34. Learning Arts (continued)

34.6 Ecological Crisis, $72.00 — K, C, 1-5
Unit focus on overpopulation, diminishing food supply, etc. and dramatically relates them to their basic causes.

34.7 Interdependence of Living Things, $41.00 — K, FS, 3-4
Explains basic principles of ecology.

34.8 Beginning Exploratory Science, $168.00 — G, F, 1-2
A unit designed to stimulate exploration and observation.

34.9 Imagination: World of Inner Space — G, Records (33 1/3) 3-4
A collection of sounds that challanges the imagination (eg., chimpanzee,eating). Makes contact with reluctant learners.

35. Learning Centers Incorporated
Princeton, New Jersey

35.1 Earth. BK172 & 180, $250.00 — F, Kit, 1-3
Materials include globes, weather maps and teacher's manuals and is designed for a class of 30 students.

35.2 Chick Embryology. K591, $60.00 — L, Materials, 1-4
A learning laboratory designed to show differences between the chick and human embryo.

35.3 Seed Garden and Greenhouse. K601, $80.00 — L, Materials, 3-4
A unit providing a complete examination of all aspects of botany. Includes wide range of materials and instrumentation.

36. Learning Media Corporation
231 North 63rd Street
Philadelphia, Pennsylvania 19139

36.1 Physical Science for Primary Children — P, OT, 2
Sand, Heat, Light, Electricty and Magnetism, and Machines $147.50

36.2 Conservation: Saving our Environment $24.00 — K, FS, 2-3

36.3 Changing the Face of the Earth, $46.00 — E, C, 2-3
A set of 10 C describing the various forms of surface features of earth.

36. Learning Media Corporation (continued)

36.4 What are Animals? $193.50 — L, FL (Super 8) 1-2

36.5 Backyard Birds and Animals $150.50 — L, FL (Super 8) 1-3
Illustrates observations of familiar forms of life. Shows their life style.

36.6 The Body $57.95 — L, OT, 2-3
Illustrates the different systems of the human body.

36.7 Science: Doorway to Discovery, $27.60 — G, C, 3
Introduces areas of science that have interested man throughout history.

37. Learning Research Association Incorporated
1501 Broadway
New York, New York 10036

37.1 Explorations in Science S30100, S30101, S30200, S30201, S30300, S30301, $61.50 — SM, Kit, 1-2
These three kits contain materials and directions for illustrating the concepts of volume density, weight as well as how they are measured.

37.2 Human Growth and Development ME298CFX, $143.00 — L, FS+C, 2-3

37.3 Ecology and You, ME367CFX, $72.50 — K, FS+C, 2

37.4 Taking a Good Look at Science, ME294FX, $45.00 — P, FS, 3
Covers standard areas of physics.

37.5 Ecological Systems SN52CFX, $54.00 — K, FS+C, 4-5
4 FS depicting the ecology of seashore, forest, ponds and desert.

37.6 The Story of the Universe, SN35-38FX, $176.00 — P, FS, 4-5
A unit on astronomy and astronomical measurement.

37.7 Earth Sciences, SN42LX, $408.00 — E. FS, 4-5

37.8 Science: Doorway to Discovery, ME292CX, $29.95 — G, C, 2
An audio (6C) presentation of scientists discovering and testing new facts in the various sciences.

38. McCormick-Mathers
450 West 33rd Street
New York, New York 10001

38.1 My World of Science. G, Text, 2-3

Book 1	Student Text $1.08	Teacher's Text $1.35
Book 2	Student Text $1.27	Teacher's Text $1.59
Book 3	Student Text $1.47	Teacher's Text $1.68
Book 4	Student Text $1.59	Teacher's Text $1.83
Book 5	Student Text $1.59	Teacher's Text $1.86
Book 6	Student Text $1.59	Teacher's Text $1.86

Series covers major themes within the physical, life and earth sciences. Emphasizes the conceptual structure of science and scientific inquiry.

39. McGraw-Hill
8171 Redwood Highway
Novato, California 94947

39.1 Eggs and Tadpoles #07-017513-6 $46.00 L, Kit, 1-4
Class kit for 30 that includes eggs and necessary equipment. Children's natural interest in living things is encouraged through observation and exploration, many questions can be answered by observation.

39.2 Challenges to Science Series, #07-058416-8 $7.32 G, Text, 3-4
Emphasis of this series is on environmental awareness and on the development of analyzing, collecting and observing skills. Over 30% of the laboratory investigations are new and have never been used in a Junior High life science course.

39.3 Earth Science: (Two Sets) 245952, 245989, $252.00 each E, OT, 4
This series covers in detail, astronomy, geology, mineralogy, and meteorology.

39.4 Ecology and Man, Set 1-3, 613375, 613382, 613390. K, FS, 4
Materials cover natural and man-managed ecosystems and explores the ranges of geographic and seasonal changes.

39.5 Experiences in Science. G, X, Text, 2-3

07-079671-8	$259.80	Materials	Lab Log, Texts for 30	Grade 1
07-079672-6	259.80	Materials	Lab Log, Texts for 30	Grade 2
07-079673-4	265.20	Materials	Lab Log, Texts for 30	Grade 3
07-079674-2	265.20	Materials	Lab Log, Texts for 30	Grade 4
07-079675-0	270.60	Materials	Lab Log, Texts for 30	Grade 5
07-079676-9	270.60	Materials	Lab Log, Texts for 30	Grade 6

This program utilizes the childs curiosity to explore and discover the world around him through his own observation and experimentation. Covers all life, physical, and earth sciences.

39. McGraw-Hill (continued)

39.6 Astronomy Series $74.50 (rental) — E, F. 4
Introduces basic concepts of earth sciences and illustrates the methods astronomers use.

39.7 Environmental Studies — K, Multi-Media, 3

Marine and Seashore Pollution	07-07949 -2	$110.00
The Great Swamp	07-07949 -0	90.00
Solid Waste Management	07-07949 -9	90.00
Air Pollution	07-07949 -7	125.00
Water Pollution	07-079499-5	120.00

A complete instructional program aimed at developing environmental awareness. Emphasises individual investigation and experimentation. Program includes texts, FS, FL, OT, masters and materials.

39.8 Match and Measure, 07-017721-X and 8, $100.35 — SM, Kit, 1-2
Unit designed to establish concrete concepts of length, area, and volume.

40. Macmillan Publishing Company
School Division
Riverside, New Jersey 08075

40.1 The Macmillan Science Series. — SM, X, Text, 2-3

Science: Observing Things	Level 1	10298	$2.67
Science: Finding Out	Level 2	10386	2.79
Science: Being Curious	Level 3	10474	3.00
Science: Comparing Things	Level 4	10562	3.21
Science: Testing Ideas	Level 5	10650	3.33
Science: Measuring Things	Level 6	10749	3.45

The above series is based on interrelated science learning, organized around basic concepts.

40.2 Programmed Learning Laboratory — P, E, Text (PI) 4-5

Motion	26300	$1.26
Force	26302	1.26
Energy and Work	26304	1.26
Simple Machines	26306	1.26
Earth	26308	1.26
Light: Flow and Energy	26310	1.26

Step by step learning encourages mastery of skills.

40. Macmillan Publishing Company

40.3 Macmillan Science Labs — G, SM, X, Kit, 2-3

- The Macmillan Science Lab.	26610	$82.50
Consumable Materials Kit, Level 1	26611	6.75
- The Macmillan Science Lab.		
Level 2 (includes Teacher's Manual)	26620	87.00
Consumable Materials Kit, Level 2	26621	15.75
- The Macmillan Science Lab.		
Level 3 (includes Teacher's Manual)	26630	97.50
Consumable Materials Kit, Level 3	26631	19.80
- The Macmillan Science Lab.		
Level 4 (includes Teacher's Manual)	26640	121.50
Consumable Materials Kit, Level 4	26641	15.75
- The Macmillan Science Lab.		
Level 5 (includes Teacher's Manual)	26650	121.50
Consumable Materials Kit, Level 5	26651	45.30
- The Macmillan Science Lab.		
Level 6 (includes Teacher's Manual)	26660	121.50
Consumable Materials Kit, Level 6	26661	7.65

A compact, portable Lab. provides all materials necessary for carrying out demonstrations, observations and experiments. Materials suffient for a class of 30.

40.4 Macmillan Elementary Science Filmstrips — G, FS, 2-3

Filmstrip Set A for Level 3, Sun, Moon, and Earth; Our Changing Earth; Living on Land; Living in Water; Your Body's Needs; Heat.	10479	$45.00
Filmstrip Set B for Level 4. Simple machines; Green Plants; Classifying Animals; Electricity; Light and Shadows; Weather.	10567	$45.00
Filmstrip Set C for Level 5 Patterns of Growth; Physical Properties of Matter; Chemical Properties of Matter; Investigating the Atmosphere; Flight into Space; Exploring the Oceans.	10655	$45.00
Filmstrip Set D for Level 6 Molecules in Motion; Planets; Light and Lasers; Ecological Systems; Animal Behavior; How Living Things Change.	10754	$45.00

The four sets of FS are concept and process oriented and encourage student participation. Designed to be used with any science text.

41. Macmillan School Supplies
P. O. Box 568
Monterey Park, California 91754

41.1 Primary Science Concepts Charts, 010-310-10 to 17 $28.00. — G, Charts, 2
A set of 8 charts aimed at stimulating discovery and providing meaningful experiences.

41.2 Earth Science Series, 097-312-551-1 to 8 $143.00 — E, Prints, 3-4
Color study prints and accompanying text, covers all aspects of the earth sciences.

41.3 Discovery Through Science. 038-322-809 $110.00 — F, X, C, 3
This unit of 20 C and teacher's guide describes science activities and experiments.

42. Master Tape Library
California State Department of Education
721 Captiol Mall
Sacramento, California 95814

42.1 *Concepts in Science. 195/69, 117/69, 053/69, 441/70 and 054/69. — G, IT, 2-3, *
A series of IT covering the Harcourt Brace series of science texts. 35 hours of recordings.

42.2 *The Environmental Handbook 1085/71 — K, IT, 5, *
A twelve hour recording of the text by De Bell.

42.3 *High School Biology 579/70 — L, IT, 5, *
An IT (46 hours) presentation of the text by H. Durst.

42.4 *Today's Basic Science, 219/69, 348/69, 039/69 and 038/69. — G, IT, 1-4, *
Four sets of IT (45 hours) covering the Today's Basic Science series published by Harper and Row.

42.5 The Wonderful World of Medicine, 356/69. — L, IT, 3-4, *
An IT, four hours in length, made from the text by R. Calder.

43. C. E. Merril Publishing Company
1300 Alum Creek Drive
Columbus, Ohio 43216

42.1 Principles of Science. — SM, Text, 4
Aimed at developing scienfic understanding in a context of uniting principles and concepts.

43.2 Principles of Science. $150.00 — SM, OT, 4
Designed to accompany above texts.

44. Moody Institute of Science
12000 East Washington Boulevard
Whittier, California 90606

44.1 Sense Perception. $300.00 — L, F, 3-5
Give an understanding of the functioning of the sensory system of the human.

44.2 Living with the Atom $290.00 — P, F, 4-5

44.3 The Human Machine $155.00 — L, F, 3-5
Emphasis focuses on concepts of structure and function.

44.4 Foodgetting Among Animals $140.00 — L, F, 3-4

45. Nasco
Fort Atkinson, Wisconsin 53538

45.1 The Human Body 0800-44, $48.00. L, FS, 4-5
Each of the FS focuses on specific structures and their functions (16 FS).

45.2 Electricity Series OT472, $127.50. P, OT, 5
Covers basic circuits, generators, and magnetism.

45.3 Complete Light Series OT428, $168.35. P, OT, 5
Covers light, reflection, color and refraction.

45.4 Sound OT436-ESr 7, $36.90 P, OT, 5

45.5 Force and Motion OT386-Em 1-10, $87.35. OT, H, P, OT, 5
Illustrates the concepts on force and motion.

45.6 Atomic and Moledular Models Z1871, $42.00. P, FS, 5
6FS. Illustrates the concept of size and the properties of atoms and molecules.

45.7 Young People's Science Encyclopedia S1990, $75.00. G, TEXT, 2-5
The 20 volumes comprising this set are written on two levels (3rd and 9th grade). Covers the physical and life sciences and describes many experiments the student can perform.

45.8 Prehistoric Life Z1954, $36.00. L, FS, 3
Describes life forms of prehistoric animals.

45.9 Ecological Systems 02834L, $34.50. K, FS, R, 4-5
Materials provide a visualization of widely separated geographic areas for extended time.

45.10 NTA Human Biological Model Z5690 M-HO-C, $130.00. L, MODEL, 4-5
Model of human with removable parts.

46. G.P. Putnam's Sons
P.O. Box 10
East Rutherford, New Jersey 07073

46.1 The Riddle of Seeds SBN 698-30293-1, $3.86. L,TEXT, 3
Text provides a different approach to the topic of seeds and their importance to life. Offers many projects for class and home.

46.2 The Story of Your Blood SBN 698-30332-6, $4.19. L, TEXT, 3
Text gives vivid descriptions and illustrations of how blood works to keep the body healthy and alive.

Putnam(continued)

46.3 Finding Out for Yourself Books — L, TEXT, 2-3
Three volumes dealing with animals, plants and changes that take place in the world. Primary emphasis on learning "by yourself" as the best way to gain information. Encourages use of scientific method. Filled with thought-provoking projects.
Gr. 3 - SBN 399-60560-6, $3.68 1968
Gr. 4 - SBN 399-60561-4, $3.68 1968
Gr. 5 - SBN 399-60562-2, $3.68 1970

46.4 The Green Frontier; Stories of Chemurgy SBN 399-60220-8, $3.86. — L, TEXT, 3-4
Fascinating account of chemurgy. Covers problem of raising and improving food plants, developing new food and non-food uses for familiar and non-familiar species, finding practical and desirable uses for otherwise waste plants and waste parts of plants.

46.5 How It Works Series, $33.38. — G, TEXT, 4-5
Clear non-technical explanations of how things actually work. Individual books $3.69 JH

Airplanes	SBN 399-60010-8
Automobiles	SBN 399-60034-5
Communication Satellites	SBN 399-60102-3
The Electronic Brain	SBN 399-60151-1
Motorcycles	SBN 399-60477-4
Parachutes	SBN 399-60700-5
Radar	SBN 399-60748-X
Telephone	SBN 399-60624-6
Weather Instruments	SBN 399-60657-2

46.6 The Story of Life SBN 399-60609-2, $15.01. — L, TEXT, 3-4
Logical, sequential presentation of essentials of life and its development, and of heredity and environment basic to the evolution of man.

46.7 Scientists' Nightmares: The Baffling, The Fake, and the Unsolvable SBN 399-60715-3, $4.49. — G, TEXT, 4-5
A challenging selection of scientific mysteries, some explained some not, which have plagued and continue to plague scientists.

47. QED Productions
P.O. Box 1608
Burbank, California 91505

47.1 The Ecological Crisis ECE 10 6FS, 3C or records, 6 study guides, 1 world population statistic chart, $69.00. — K, FS, C, TEXT, 4-5

QED Productions (continued)

Series is designed to bring together such problems as pesticides, over-population, diminishing food supply, ecological disturbance, etc., and relate them to their basic causes dramatizing their factual statistics. Received a citation from National Council on Family Relations.

48. Rand McNally and Company
School Department
Box 7600
Chicago, Illinois 60680

48.1 Science Curriculum Improvement Study — G, TEXT, 2-3
Life Science Level One, Organisms Unit , 10106-4, $112.00. Physical Science Level Five, Energy Sources Unit, 10141-2, $220.00. Total cost for Level One program, $2047.00.
Life Science and Physical Science each for six levels. A wide variety of physical materials and living organisms invites children to touch, manipulate, observe, learn. Works in three stages: exploration, invention, and discovery. Each stage serves to reinforce previous learning. Superbly suited to inner city needs.

48.2 Interaction of Earth and Time 95-2719, $310.00. — E, TEXT, 4-5
Examines changes on, beneath and above the earth surface through time. Investigations of planets' structures and relationships, land forms, fossil records, etc., are all part of the program. Leads to a full understanding that the earth is not indestructible. Includes books, tests and varying equipment for 30 students.

49. Sargent-Welch Scientific Company

49.1 Auto Tutor Mark 4/III 8700/7700, $1150-750. — AV EQUIPMENT
Equipment to show programmed instructional material.

49.2 Elementary Biology T8730, $144. — L, PI(A-V), 3-4
Covers plant and animal kingdom with emphasis on the human.

49.3 Elementary Earth Science T8735, $240.00 — E, PI(A-V), 3-4
5 PI reels, J-J.

Sargent-Welch (continued)

49.4 Elementary Physical Sciences T8740, $384.00. 8 PI reels. Covers traditional areas, light, sound, heat. — P, PI(A-V), 4-5

49.5 Elements of Physics T7756, T7757, $760.00. 8 PI reels. Presentation of a first course in physics. — P, PI(A-V), 4-5

50. Scitool Masker Science
745 State Circle
Ann Arbor, Michigan 48104

50.1 The Five Senses 3600, $11.50. — L, MODELS, 3-4

50.2 Geology VLI-701-705, $80.00. — E, 35mm SLIDES, 3-4

50.3 Human Body EHB-1580, $47.00. 120T, I-H. — L, OT, 3-5

50.4 Conservation ESC-1710, $28.00. 6 OT, I-J. — K, FOT, 3-4

50.5 Ecology 620-401, $34.95. FS&C, I-H. — K, FS&C, 4-5

50.6 Sciences for Grade School TP-6-9-14, $15.95. Designed to encourage exploration, experimentation and conceptualization. — G, TEXT, 2

51. Scott Education
Holyoke, Massachusetts 01040

51.1 Earth Sciences 72010-72012, $274.50. Covers current topics in earth sciences, includes teacher guide. — E, OT, 4-5

51.2 Human Nervous System JH 3420 FC, $118.00. Includes 8 FS&C. Covers structure and function of nervous system. — L, FS&C, 3-4

51.3 Animal Kingdom 72001-103,-203,303, $177.00. 39 OT. Depicts the continuity of the animal kingdom with particular emphasis on structure, function. — L, OT, 3-4

51.4 Pollution 3925-26, $90.00. Clear and incisive presentation of causes and effects of air and water pollution. Includes teacher guide. — K, FS, OT, C, 2-3

52. Scott, Foresman and Company
2000 East Lake Avenue
Glenview, Illinois 60025

52.1* Sense and Tell 01693, $54.00. — SM, TEXT, MATERIALS *
Unit develops the powers of observation, classification and communication.

52.2 Measure and Find Out $318.35. — SM, TEST, LABS., 2-4
Activity centered program for up to 30 students; gives practice in observing, measuring, inferring and communicating.

52.3 The Basic Science Program — G, TEXT, 1-4

		Text	Teacher Guide	Workbook
$1.00	K	"		
$2.64	1	"		
$5.64	2	"	"	
$6.12	3	"	"	
$6.42	4	"	"	
$6.60	5	"	"	
$7.26	6	"	"	"
$14.04	7	"	"	"
$17.88	8	"	"	"

53. See
3 Bridge Street
Newton, Massachusetts 02195

53.1 Science Books for Children DOVCOM, $7.50. — G, TEXT, 2-3
Six books that focus on physical and life sciences.

54. Sigma Educational Films
5508 Cahuenga Boulevard
North Hollywood, California 91601

54.1 Laboratory Biology $72.00. — L, FS, 4-5
This set of 12 FS visually illustrate the dissection of organisms.

54.2 Earthquakes and Volcanoes $68.00. — E, FS, 1-4

55. Silver Burdett Company
Box 362
Morristown, New Jersey 07960

Silver Burdett Company (continued)

55.1 Silver Burdett Science Program — G, TEXT, 2-3

$12.68	Grade 1
$15.09	2
$21.26	3
$14.67	4
$18.39	5
$18.90	6

Program covers all sciences and includes teacher and student text plus spirit masters.

55.2 Silver Burdett Student Laboratory Program $155.42. — P, X, LAB KIT, 3-4
Lab kits plus teacher guide are included covering electricity, wave motion, mechanics, and measurement.

56. Singer
1345 Diversey Parkway
Chicago, Illinois 60614

56.1 Learning About Your Body MMTC-15-K, $167.00. — L, FL, FS, C, 2
A multi-media kit that includes 6 captioned FS, 16 study prints, 4 super 8 F and a set of C.

56.2 Physical Science MMTC-19, MMTC-17, $247.00. — P, FS, OT, C, 3-4
A multi-media presentation of standard content areas of physics (light, sound, electricity, magnetism).

56.3 Let's Explore the World of Nature 423-SA, 423-SB, $78.00. — E,L, FS, 3-4
Students learn about plants and animals found in a variety of topographical and climatic conditions.

56.4 Experimenting in the Physical Sciences 449-SA, $72.50. — P, X, FS, 4
Photographs illustrate basic scientific principles, laboratory procedures, and apparatus.

56.5 Chemistry for Today 493-SA/SB, $65.50. — P, FS, 4
Instructional materials on chemistry including 12 captioned FS.

56.6 Ecology ECF-90704, $130.00. — K, FL, 3-4
Illustrates causal relationships, ecological problems and their potential solutions.

57. SRA

57.1 Inquiry Development Program in Earth Sciences $717.97. E, F, 4-5
This multi-media kit provides information and materials that invite the student to work and think like a geologist. Unit includes text, guides, photos, charts, graphs. 25F (regular or super 8).

57.2 Inquiry Development Program in Physical Sciences $405.32. P, F, 3-4
Unit provides the student with materials to pursue and test physical theory and concepts in a meaningful way (25 F standard or super 8).

58. Steck-Vaughn Company
P. O. Box 2028 Vaughn Building
Austin, Texas 78767

58.1 Elementary Science Series 0234-0249, $15.96. G, TEXT, 2-4

Do You Know	Grade 1
Things Around You	2
You Find Out	3
The World About You	4
The Earth of Ours	5
Learning to Use Science	6
Exploring Our World	7
Scientific Living Today	8

Series provides general introduction to the various fields of science.

59. Sterling Educational Films
241 East 34th Street
New York, New York 10016

59.1 The Metric System $630.00. SM, F(8mm), 3-5
4 8mm color films. Cover what is measurement and how area, volume, distance and weight are measured.

59.2 Seasons $360.00. E, L, F(8mm), 2-4
Illustrates the seasons and depicts the effect on plants, animals, and humans (4 8mm F).

60. System for Education
612 North Michigan Avenue
Chicago, Illinois 60611

60.1 Earth-Space Sciences $478.00. — E, OT, 4-5
Demonstration kits, charts, manual.
This system consists of three units,
geology/geography, astronomy, and meterology.

60.2 Magnetism and Electricity MI-7,E-1-7, $224.00. — P, F(super 8), 4-5
14 super 8 mm F.

61. Teaching Aids Incorporated
P.O. Box 3527
Long Beach, California 90803

61.1 Our World of Science Series. 2201-2224, $105.84. — G, C, 2-3
4.90 tape. Series contains 24C.

61.2 Science Giants 301-312, $52.92. — G, C, 4
Biographies of the great contributors to
earth science (12C).

62. Technifax Education Division
Holyoke, Massachusetts 014040

62.1 Animal Kingdom Vol I-II 72001-002, $97.50. — L, OT
This set of 29 OT covers all forms of
animals from paramecium to man, from
a structure-function approach. Materials
are ungraded.

62.2 Earth Sciences 72012-003, 72011-003, $283.50. — E, OF, 5
Program consists of three units astronomy,
geology, and meterology. Teacher's guide
included.

63. Tweedy
208 Hollywood Avenue
East Orange, New Jersey 07018

63.1 Basic Science Series $249.00. — GEN, OT, 4-5

1101	Animal	38.00	8 OT
1102	Biology	26.00	6 OT
1103	Human Body	45.00	10 OT
1104	Chemistry	26.00	5 OT
1105	Geology	28.00	6 OT
1106	Astronomy	48.00	11 OT

Tweedy (continued)

1107 Meteorology 36.00 8 OT
1108 Electricity 35.00 8 OT

64. Valiant
237 Washington Avenue
Hackensack, New Jersey 07602

64.1 Our Environment I-III MNK-150C, 151C, 152C, 153C, $196.00, — K, FS, CHARTS, OT, C, 2-3

64.2 Physical Science VCT-1800, $210.70. Series presents a capsuled study of matter, chemistry and properties of materials (43C). — P,C, 5

64.3 Our World of Science VCT-2200, $117.60. Tapes introduce child to the wide variety of content covered in science (24C). — G, C, 2-3

64.4 Environmental Sciences VRF-386C, $129.50. Unit consists of 10 FS with accompanying C. — K, E, FS, C, 3-5

64.5 Physical Science 500 CEJ-SR, $145.00. Unit includes 350T plus teacher manual. — P, OT, 1-2

64.6 Weather 500 HO-SR, $112.00. Unit includes 27 OT. — E, OT, 1-3

64.7 Basic Science VT-766-783 101 OT. Provides an introduction to the various content areas of science. — G, OT, 2-4

64.8 Water Dweller Series 3447-61, $402.50. 15 super 8 films, each $23.50. By Disney illustrating the variety of life froms inhabiting the water. — L, F(super8), 1-4

64.9 Measuring and Observing Our World 7631-40 $249.50, $24.95 per film. Films illustrate various ways of making scientific measurements. 10 super 8 films. — SM, F(super 8), 1-3

64.10 Picture Dictionary of Geographical Terms 1760-65 $14.70. — E, FL, 3-5

65. Visual Materials Incorporated
Redwood City, California

65.1 Problems of Pollution WS 048, $6.95. K, OT, 2
12 color transparencies, 14 duplication masters. Introduction to causes, effects and possible solutions to pollution and basic ecological problems as they relate to individuals. Provides a teacher transparency workbook with behavioral objectives and worksheets which provide pre-and posttests and study materials.

65.2 Understanding Solids, Liquids and Gases WS 020, $6.95. P, SM, OT, 2-3
12 OT, 14 duplication masters. Presentations and activities on the states of matter, movement of molecules, etc. Includes suggested experiments.

66. Wards
P.O. Box 1749
Monterey, California 93940

66.1 The Science of Life $231.00. L, FS, 5
33FS.

168W9020 Checks and Balance in Nature	$56.00
168W9000 Man's Impact on Environment	$63.00
168W9010 Energy in Life	$56.00
168W9030 Ascent of Man	$56.00

Focuses on biological problems in human society emphasis is on concepts and understanding.

67. Warren's Educational Supplies
980 West San Bernardino Road
Covina, California 91722

67.1 Basic Science Lab Kits G, X, LAB, 3-4

Lab 1 Basic Science Concepts	198-655	$54.50
Lab 2 Machines and Energy	198-663	$54.50
Lab 3 Sources of Energy	198-671	$51.00

Approximately 60 experiments per lab principally focusing on physical sciences.

68. Franklin Watts Incorporated
845 Third Avenue
New York, New York 10022

68.1 The Franklin Watts Beginning Science Bookshelf P, L, TEXT, 1-2
SBN 531-00732-4, $71.78.

Franklin Watts Incorporated (continued)

"Let's Find Out Series" focuses on specific areas within the physical and life sciences. Planned to develop such processes as observation, evaluation, and drawing conclusions.

68.2 The Franklin Watts Intermediate Science Bookshelf SBN531-00731-6, $70.91. This series focuses chiefly on life sciences with special emphasis on the human physiology — L, TEXT, 3-4

68.3 Franklin Watts Advanced Science Bookshelf SBN-00729-4, $86.59. Series presents biographies of scientists. — P, L, TEXT, 4

69. Welch Scientific Company
7300 North Linder Avenue
Skokie, Illinois 60076

69.1 Autotutor Marke III 7700, $1250.00 (rental $45.00 per month). — TEACHING MACHINE

69.2 Basic Electricity 7752, $90.00. Self paced film. — P, F(PI), 5

69.3 Elements of Physics 7756, 7757, $720.00 ($64.00 rental). Self paced film presenting a complete course in physics. — P, F(PI), 5

70. Western Publishing Company, Incorporated
Education Division
850 Third Avenue
New York, New York 10022

70.1 Golden Experience Earth Books $29.70. Six texts covering birds, animals and the oceans. — L, E, TEXT, 3-4

70.2 Golden Nature Guides $58.95. Sufficient texts for a class of 32. — L, K, TEXT, 4-5

70.3 Human Biology J3-854, $140.00. 35 OT. — L, K, TEXT, 4-5

70.4 Elementary Science J3-868, $405.00. 101 OT. — G, P, OT, 4-5

70.5 General Science J3-850, $190.00. 51 OT. — G, OT, 5

71. Albert Whitman and Company
560 West Lake Street
Chicago, Illinois 60606

71.1 Experiments With Science $29.92. G, X, TEXT, 3-4
Series of 8 texts explores basic concepts through experimentation.

71.2 Story of Science Series $124.75. G, TEXT, 4-5
Covers major science areas; electricity, volcanoes, and earth. Series consists of 25 texts.

72. H. Wilson Corporation
555 West Taft Drive
South Holland, Illinois 60473

72.1 Men of Science SC4-CT, $47.00. G, C, 4-5
Describes the life and scientific contribution of 12 major figures (6C).

72.2 Bugs and Other Insects SC6-CT, $15.80. L, C, 1-2
Describes the growth and world of various insects.

72.3 Solar System SC7-CT, SC7-T $31.60. P,E, C, 3
Unit describes the science and history of astronomy.

73. Xerox
Education Center
Columbus, Ohio 43216

73.1 Discovering Science 0.70/pupil. G, NEWSLETTER, 3-4
Student receives four units per semester covering new scientific developments.

73.2 Current Science $1.10/pupil/school year. G, NEWSLETTER, 3-4
Weekley.

73.3 Science, Friend or Foe 0.40/pupil. G, TEXT, 4-5
Questions the use of science.

73.4 Junior High School Science Program, G, TEXT, OT, 4*
Life Science, A Problem Solving Approach and
Physical Science a Problem Solving Approach
$66.83 each.
Includes student and teacher text, tests, masters and 48 OT. Two one-year programs designed for students of average or below average ability. Integrates facts, explanation and lab activities.